What is claimed is:

1. A method of generating on an output line a high-power modulated radio frequency signal S_{OUT} from a low or medium frequency information signal S_{IN}, the method comprising the steps of:

- pulse-shaping the information signal using sampling having a sampling frequency to form a digital signal S_D having at least two discrete signal values;
- generating for each of the discrete signal values a carrier;
- amplifying and mixing the information signal to produce a switched radio frequency signal carrying the information signal; and
- filtering the switched radio frequency signal for obtaining the high-power modulated radio frequency signal;

wherein, in the step of generating, the carriers are generated as alternating radio frequency voltages, and in the step of amplifying and mixing, amplifying is performed by connecting, controlled by the discrete signal values of the digital signal, the carrier associated with the respective discrete signal value to the output line.

2. The method according to claim 1, wherein, in the step of generating, the carriers are generated to have frequencies being multiples of the sampling frequency of digital signal.

3. The method according to claim 1, wherein, in the step of generating, the carriers are generated to be sinusoidal signals.

4. The method according to claim 3, wherein, in the step of filtering, a band-pass filtering is made rejecting distortion and/or an unwanted side band produced by the controlled connecting of the carriers in the step of mixing and amplifying.

5. The method according to claim 1, wherein, in the step of mixing and amplifying, in connecting the carriers, the times at which the connecting of any of the carriers is started or ended are chosen to coincide with a moment at which the respective carrier

is equal to zero or is close to zero to avoid energy losses during the starting or ending of the connecting.

6. The method according to claim 1, wherein, in the step of generating, the carriers are generated as non-sinusoidal signal to be sums of frequency components, all of the components having frequencies being integer multiples of the sampling frequency.

7. The method according to claim 6, wherein, in the step of generating, the carriers are generated to stay close to zero for a time period at or around the times at which the connecting of any of the carriers is started or ended.

8. The method according to claim 1, wherein the information signal is quadrature shifted in two components so that, in the step of pulse-shaping, two digital signals are formed, each having at least two discrete signal values, and that in the step of generating, carriers are generated for each of the signal values of the two digital signals, the carriers generated for the signal values of one of the digital signals having a 90 degrees phase-difference in relation to the carriers generated for the signal values of another of the two digital signals.

9. The method according to claim 8, wherein the side-bands are used as two linearly independent channels as in the quadrature phase I and Q arrangement.

10. The method according to claim 8, wherein, when one band-pass filter is used, the signals formed in the step of mixing and amplifying are added before the filter.

11. The method according to claim 8, wherein, when two band-pass filters are used the signals are added after the band-pass filters.

12. The method according to claim 8, wherein the filter(s) is/are (a) band-pass filter(s) rejecting distortion achieved by the amplification.

13. The method according to claim 1, wherein, in the step of pulse-shaping, a digital signal having only two signal values is formed.

14. Apparatus for generating on a high-power modulated radio frequency signal S_{OUT} from a low or medium frequency information signal S_{IN}, the apparatus comprising:
- a quantifier for pulse-shaping according to a sampling frequency the information signal to form a digital signal S_D having at least two discrete signal values;
- a switching unit connected to the quantifier to receive the digital signal and comprising carrier generators, one individual generator provided for and associated with each of the at least two signal values; and
- a filter connected to an output line of the switching unit for achieving the high-power modulated radio frequency signal,
wherein the carrier generators are arranged to generate alternating radio frequency carrier voltages and that the switching unit comprises switches for achieving a switched radio frequency signal S_{SW} carrying the information content of the information signal, each of the switches being associated with and controlled by an individual one of the signal values of the digital signal, to connect the carrier associated with the signal value to the output line when the digital signal adopts the respective signal value and to disconnect the carrier when the digital signal does not adopt the respective signal value.

15. The apparatus according to claim 14, wherein the quantifier comprises a sigma-delta modulator.

16. The apparatus according to claim 14, wherein the filter is a band-pass filter rejecting unwanted signals and distortion achieved by controlled connecting and disconnecting of the carriers.

17. The apparatus according to claim 14, wherein the carrier generator comprises a transformer coupled to a single generator element to generate carrier voltages having different amplitudes.

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